

REMARKS

The Office Action mailed on May 03, 2007 and the telephonic interview with the Examiner on November 28, 2007 are acknowledged. Applicant requests examination of the above-mentioned application in view of the following remarks.

I. Substance of Interview with the Examiner

Applicants' representative, Mr. Ronald Kamis, and applicants' consultant Dr. Bomi Framroze had a telephonic interview with the Examiner, Mr. Anthony Weier, on November 28, 2007. The claims and prior art were discussed in general. The meaning of "continuous" in Fuentevilla and differences between instant claims and Fuentevilla were discussed.

II. Status of Claims

By this Amendment, claims have been amended and cancelled without prejudice or disclaimer. Claims 30-73, 84-88 and 90 have been withdrawn by the Examiner under a Restriction Requirement. Applicants respectfully are maintaining method claims 30-31, 34-57 and 60-65 for the purpose of rejoinder upon allowance of the non-restricted claims. Claims 17, 91-93 are cancelled. Reconsideration is respectfully requested in view of the above amendments and the following remarks.

III. Rejections

A. Rejection under 35 U.S.C. § 112

Claim 91 and 93 have been rejected as allegedly failing to comply with the written description requirement of 35 U.S.C. 112, first paragraph.

The Examiner states that claim 91 and 93 contain subject matter which was not described in the specification. Applicants, without acquiescing in the Examiner's rejection, have obviated the rejection by canceling claims 91 and 93.

Claims 17, 91 and 93 have been rejected as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention under 35 U.S.C. §112, second paragraph.

The Examiner states that in claims 91 and 93 it is not clear whether or not the new components recited in these claims are new additional batch functioning components or whether the original areas may be operated. Applicants, without acquiescing to the Examiner's rejection, have obviated the rejection by canceling the claims 91 and 93.

The Examiner also maintains that in claim 17, the term "thread having a sheet located at its periphery" is confusing. Applicants, without acquiescing in the Examiner's rejection, have obviated the rejection by canceling claim 17.

B. Prior Art Rejections

Rejection under 35 U.S.C. § 102

Claims 1, 4-7, 14, 21, 22, 74, 91 and 93 have been rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 4,212,889 ("the Fuentevilla reference").

Under 35 U.S.C. § 102(b), a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference (*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

Independent claims 1 and 74 recite that "the "hydrolysis area" and "inactivation area" operate in a continuous non-batch mode. The Fuentevilla reference, in contrast, describes a "batch process". As seen, for example, in Figure 1A, and as discussed in the Declaration of Dr. Bomi Framroze, attached hereto, hydrolysis and inactivation are carried out in a batch mode.

Furthermore, as set forth in the Declaration of Dr. Bomi Framroze, a batch mode is a process in which substrates and catalysts are added to a vessel and the vessel is then closed to any further addition of reactants, the reaction is carried out to completion and the products are removed. On the other hand, a continuous process is a process in which reactants and catalysts are continuously added while the reaction is on-going and product is continuously removed.

Accordingly, the Fuentevilla reference fails to disclose each and every element as set forth in the claims of this patent application. Applicants therefore submit that the rejected claims are not anticipated by the Fuentevilla Patent. Applicants therefore respectfully request reconsideration and withdrawal of the rejection.

Furthermore, the Fuentevilla reference does not teach or suggest the subject matter of independent claims 1 or 74. As mentioned in the Declaration of Dr. Bomi Framroze, there are certain problems that would have been anticipated by a person of ordinary skill in the art and these problems would have discouraged the skilled artisan from converting a batch process, as described in the Fuentevilla reference, into a continuous non-batch process as set forth in the rejected claims. This "teaching away" renders the invention of the rejected claims unobvious to a person of ordinary skill in the art. For example, a person

skilled in the art can anticipate the problem of solid or semisolid material clogging the reactors, which would thereby preclude him from trying such an embodiment. However, putting the invention described in claims 1 and 74 into practice provides a number of advantages over the batch process, for example, limited clogging which allows for continuous use over long periods of time and the production of uniform soluble protein end product.

Furthermore, the quality of final product produced by the invention of claims 1 and 74 is significantly superior to the product produced by a batch process. Due to markedly different activity of particular enzymes towards different amide bonds in protein raw material substrate, it is important to control hydrolysis in order to produce a uniform final product. In a batch process, overhydrolysis of amide bonds for which an enzyme has higher affinity can not be efficiently controlled, resulting in a product containing a mixture of peptides with a large variation in size, also called widely spread product. Producing a product with lesser variation in the size of peptides upon hydrolysis of protein raw material is not achieved by a batch process as set forth in the Fuentesvilla reference. Such uniformity in the peptides produced upon hydrolysis of protein raw material is achieved in a continuous non-batch process of claims 1 and 74, in the case where two enzymes having different affinities for target amide bonds are introduced in the product line at different locations. Peptide end products by this method contain peptides of uniform size, also called as closely spread product. Such closely spread peptide hydrolysis product is superior, for example, because it has higher palatability than widely spread peptide produced by a batch process.

Rejection under 35 U.S.C. § 103

Claims 8, 18, 20, 23, 24, and 26-29 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Fuentevilla.

Claims 13, and 15, have been rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Fuentevilla taken together with DE 2526879.

Claims 9, and 10 have been rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Fuentevilla taken together with FR 2352498 or Fuentevilla taken together with DE 2526879 and FR 2352498.

Claims 16, and 19, have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Fuentevilla taken together with DE2526879 and either one of MacKenzie or Eweson.

Claims 17 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Fuentevilla taken together with DE2526879 and Krofta.

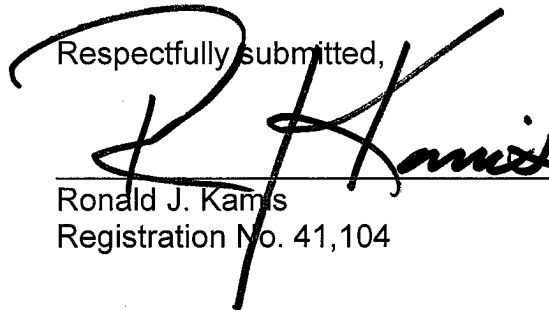
Applicants note that all of the above claims that are rejected under 35 U.S.C. §103(a) are dependant claims that depend on either claim 1 or claim 74. As stated above, claims 1 and 74 are improperly rejected as anticipated by the Fuentevilla Patent. Therefore, the claims that depend on claim 1 and 74, can not be properly rejected as anticipated or obvious by the primary Fuentevilla reference or any of the secondary references, either alone or in combination.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §112, 35 U.S.C. §102(b) and 35 U.S.C. §103(a) is respectfully requested.

Conclusion

In view of the above amendments and remarks, early notification of a favorable consideration is respectfully requested. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below to expedite prosecution. The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 50-3380.

Respectfully submitted,



Ronald J. Kams
Registration No. 41,104

Customer No. 49442
BAKER & DANIELS
805 15th Street, N.W., Suite 700
Washington, DC 20005
(202) 312-7440 Telephone
(202) 312 7460 Facsimile

RJK/maj